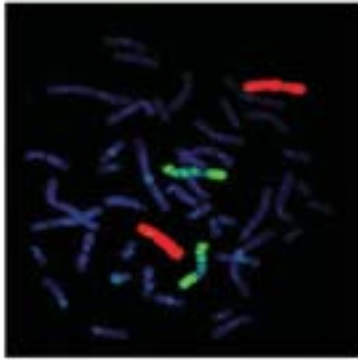
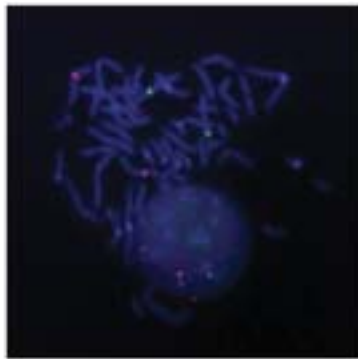


# Nucleic acid labeling and modification

## Fish labeling



Multicolor chromosome PAINt analysis using Label IT® FISH Biotin labeled human chromosome 7 (Streptavidin-Cy™3 conjugate detection) and Label IT® FISH Fluorescein labeled human chromosome 6 on Jurkat metaphase spread.



Multicolor chromosome centromeric analysis using Label IT® FISH Cy™3 labeled human chromosome 7 and Label IT® FISH Fluorescein labeled human chromosome 6 on Jurkat metaphase spread.

### Related products

Description	Cat.#	Qty
Acridine Orange	FP-05920D	50 g
7-Aminoactinomycin D	FP-132303	1 mg
DAPI	FP-371867	10 mg
Hoechst 33342	FP-BB1340	5 ml

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## Label IT® Fluorescence *In Situ* Hybridization Kits (FISH)

- ◆ Enables convenient, high efficiency labeling of any probe.
- ◆ Obtain consistent and controlled labeling with the Label IT® non-enzymatic covalent attachment method.
- ◆ Optimized protocols for use in centromeric and PAINt analysis.
- ◆ Provides sensitive hybridization detection.

Fluorescence *In Situ* hybridization (FISH) uses fluorescent DNA probes to vividly paint genes or chromosomes, revealing the localization of specific nucleic acid sequences. This valuable technique has proven useful for gene mapping and the identification of chromosomal abnormalities. FISH entails the preparation of short sequences of fluorescently labeled DNA (probes) which are complementary to the target DNA sequences. Metaphase chromosome spreads are prepared, RNase treated, dehydrated and denatured according to the protocol provided. The slides are then hybridized with the fluorescently labeled DNA probe. Post hybridization, the slides are washed, counterstained with a DAPI antifade mixture, and analyzed using fluorescent microscopy.

The optimized Label IT® FISH Kits utilize Label IT® technology to prepare superior labeled probes, by design, and hybridize them to targeted interphase/metaphase chromosome spreads.

The Label IT® FISH Kits are supplied with labeling reagents, hybridization buffer, and an optimized protocol, which can be used to generate fluorescently labeled probes for a variety of FISH applications, including :

- ◆ Alpha-satellite centromeric probes - generated from repetitive sequences found at the centromeres of specific chromosomes. Researchers use this technique to enumerate specific chromosomes.
- ◆ Whole chromosome PAINt probes (Protocol Aberration Identification and Nomenclature Terminology) - collections of small probe sequences that hybridize to different regions along the length of the same chromosome. These probes are useful for examining chromosomal abnormalities.

Each FISH kit includes the appropriate Cy™3, TM-Rhodamine, Fluorescein or Biotin labeling reagent, labeling buffers and hybridization buffer. The Label IT® FISH Biotin Kit does not contain Biotin detection reagents.

Description	Cat.#	Qty
Label IT® FISH Cy™3 Labeling Kit	AO0901	10 µg *
	AO0900	2 µg **
Label IT® FISH TM-Rhodamine Labeling Kit	AO0891	10 µg
	AO0890	2 µg
Label IT® FISH Fluorescein Labeling Kit	AO0991	10 µg
	AO0990	2 µg
Label IT® FISH Biotin Labeling Kit	AO0921	10 µg
	AO0920	2 µg

\* Each kit contains sufficient reagents to label 10 µg of DNA and perform 40 PAINt hybridizations or 200 centromeric hybridizations.

\*\* Each Kit contains sufficient reagents to label 2 µg of DNA and perform 8 PAINt hybridizations or 40 centromeric hybridizations.